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USSR

Examination of Exposed and Processed Soviet X-Ray Film

Dec 52-May 53

Early May 53

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1. In January 1953 received three samples of exposed and processed x-ray film of Soviet manufacture from the Office of Naval Intelligence. Following is the evaluation of this film:

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a. Chest Films

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1) Poor position of patient on a film too small for the average thorax.
2) Film density is poor and lacks contrast.
3) Film is thin and mottled. This would indicate old film. (Mottling will appear on film made in US when it is out of date or exposed to high humidity.)
4) The cardiovascular system is not well defined. (This is probably due to an excessive time factor used during the exposure.) Increased time is necessary when the x-ray machine is low in milliamperage, under 100 MA.
5) Lead markers are not used to indicate right from left nor to indicate name, date or place where film was made.
6) The chest films are not considered of diagnostic value by our standards.

b. Films of extremities

1) Films too light and lack contrast for bone but are good for soft tissue shadows.
2) Films are mottled.
3) Shoulder girdle poorly positioned for proper examination.
4) Lack of lead markers.

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2. We made photomicrographs of the films which showed that the base had an approximate thickness of 0.1mm and the emulsion layer approximately 0.01mm. The film was coated on both sides of the support and seemed to have no protective gelatin overcoat. The film support was found to be cellulose nitrate, which was soluble in methanol. Accordingly, it was considered probable that the 10.5 to 11.2% nitrogen variety of the ester was used.

Available for selection and inspection from the CIA Library are prints of these 2500X photomicrographs of exposed and processed Soviet x-ray films.

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